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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,585	03/22/2000	Jun Kametani	P/2635-43	8649

7590 11/05/2003

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EXAMINER	
BOAKYE, ALEXANDER O	
ART UNIT	**PAPER NUMBER**
2667	6

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/532,585	Applicant(s) KAMETANI, JUN	
	Examiner Alexander Boakye	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-23 and 26-31* is/are rejected.

7)☒ Claim(s) *3, 4, 6 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 and 4*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-15,16-23 and 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7 (line 16), "said memory" lacks antecedent basis.

In claim 16 (line 12), "said routing data" lacks antecedent basis.

In claim 26 (line 8), "said encrypt" lacks antecedent basis.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of Fig. 1 in view of Noriyuki (US Patent # 6,510,159).

Regarding claim 1, the admitted prior art of Fig. 1 discloses a packet switching apparatus comprising: a plurality of lower layer processing units (column 2, line 3, see Fig. 1 block 110) which are connected to physical output ports (column 3, lines 3-5)

,and each of which carries out a process for a data link layer and a physical layer to a packet (column 2, lines 7-10). Furthermore, the admitted prior art of figure 1, teaches transfers of the routing packet to one of the plurality of lower layer processing units based on the routing data (column 2, line 27- column 3, lines 1-3). The admitted prior art of figure 1 does not teach a table storing flow data including a routing data and a search key.

The admitted prior art of figure 1 also fails to disclose a processing unit which searches the flow data from the table based on a search key. However, Norijuki discloses a table storing flow data including a routing data and a search key (column 2, lines 17-25). Norijuki further teaches a processing unit which searches the flow data from the table based on a search key (column 3, lines 35-54). One of ordinary skill in the art would have been motivated to incorporate a table storing flow data including a routing data and a search key such as the one taught by Noriyuki in the admitted prior art of Fig. 1 in order to improve the table retrieval efficiency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a table storing flow data including a routing data and a search key such as the one of Norijuki in the packet switching system of the admitted prior art of Fig. 1, with the motivation being that it provides address of the next hop and packet transfer information, thus enhancing transmission efficiency.

Regarding claim 2, the admitted prior art of figure 1 discloses a packet memory (column 2, lines 2-3) and wherein the processing unit stores the received packet in the packet memory (column 2, lines 17-22). What the admitted prior art of Fig. 1 fails to

teach is extracts the search key from the stored packet. Norijuki discloses extracts the search key from the stored packet (column 2, lines 17-21).

Thus, one of ordinary skill in the art would have been motivated to incorporate a search key in the table such as the one of Norijuki in order to improve the table retrieval efficiency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a search key in the table such as the one of Norijuki into the admitted prior art of Figure 1, with the motivation being that it provides address of the next hop and packet transfer information, thus enhancing transmission efficiency.

Regarding claim 5, the admitted prior art of figure 1, teaches that the routing data includes a port number specifying a physical output port (column 3, lines 3-8; the port number is inherent in the physical output port), and that the processing unit selects one of the plurality of lower layer processing units based on the port number (the claimed port number is inherently in the physical output port) of the routing data. The admitted prior art of figure 1, discloses transfers the routing packet to the selected lower layer processing section (column 3, lines 1-3). The admitted prior art differs from the claimed invention in that the admitted prior art of figure 1 does not disclose the claimed search key. However, Norijuki teaches a search key (column 3, lines 51-52). One of ordinary skill in the art would have been motivated to incorporate a search key in the address table such as one of Norijuki into the admitted prior art of figure 1 in order to improve the table retrieval efficiency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a search key such as the

one of Norijuki in the admitted prior art of figure 1 with the motivation being that it provides packet transfer information, thus enhancing efficiency.

Regarding claim 24, the admitted prior art of figure 1 discloses a method of switching a routing packet comprising: transferring the routing packet to a physical output port determined based on a destination address of the routing packet (column 3, lines 1-8). The admitted prior art of figure 1, fails to disclose searching a table for a flow data based on a search key of a routing packet as well as the routing packet is registered on the table. However, Noriyuki discloses searching a table for a flow data based on a search key of a routing packet as well as the routing packet is registered on the table (column 3, lines 35-54) .

Thus, one of ordinary skill in the art would have been motivated to incorporate a table such as the one of Norijuki in order to improve the table retrieval efficiency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a table such as the one of Norijuki into the admitted prior art of Figure 1, with the motivation being that the speed of the relay process can be improved by storing various pieces of information into the address table.

3. Claims 26, 27,28, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriyuki (US Patent # 6,510,159) in view of Rasmussen et al. (US Patent # 5,222,136).

Regarding claims 26 and 27, Noriyuki discloses: searching a table for a flow data based on a search key of a routing packet, the flow data including the search key, routing data , and the search key including a destination address (column 3, lines 35-

54); outputting the another routing packet as a transmission packet to a physical output port (column 3, lines 29-33). Noriyuki does not teach security data as well as selectively generating one of the encrypt and decrypt instructions based on the destination address.

However, Rasmussen teaches security data as well as selectively generating one of the encrypt and decrypt instructions (column 3, lines 54-64) based on the destination address. Thus, one of ordinary skill in the art would have been motivated to incorporate selectively generating one of the encrypt and decrypt instructions such as the one taught by Rasmussen in the communication network of Noriyuki in order to provide integrity. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate encrypt and decrypt instructions such as the one of Rasmussen into the communication network of Noriyuki with the motivation being that it provides confidentiality and authentication.

Regarding claim 28, Noriyuki teaches searching the table for a flow data based on a search key of the transmission packet (column 3, lines 35-54); and transferring the transmission packet to a physical output port determined based on a destination address of the transmission packet when the flow data for the search key of the routing packet is registered on the table (see Fig. 2).

Allowable Subject Matter

4. Claims 3, 4, 6 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-15, 16-23 and 29-31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (703) 308-9554. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Chi Pham, can be reached on (703) 305-4378. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye

Patent Examiner
AB
10/28/03

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 10/29/03